Supplemental figure S1

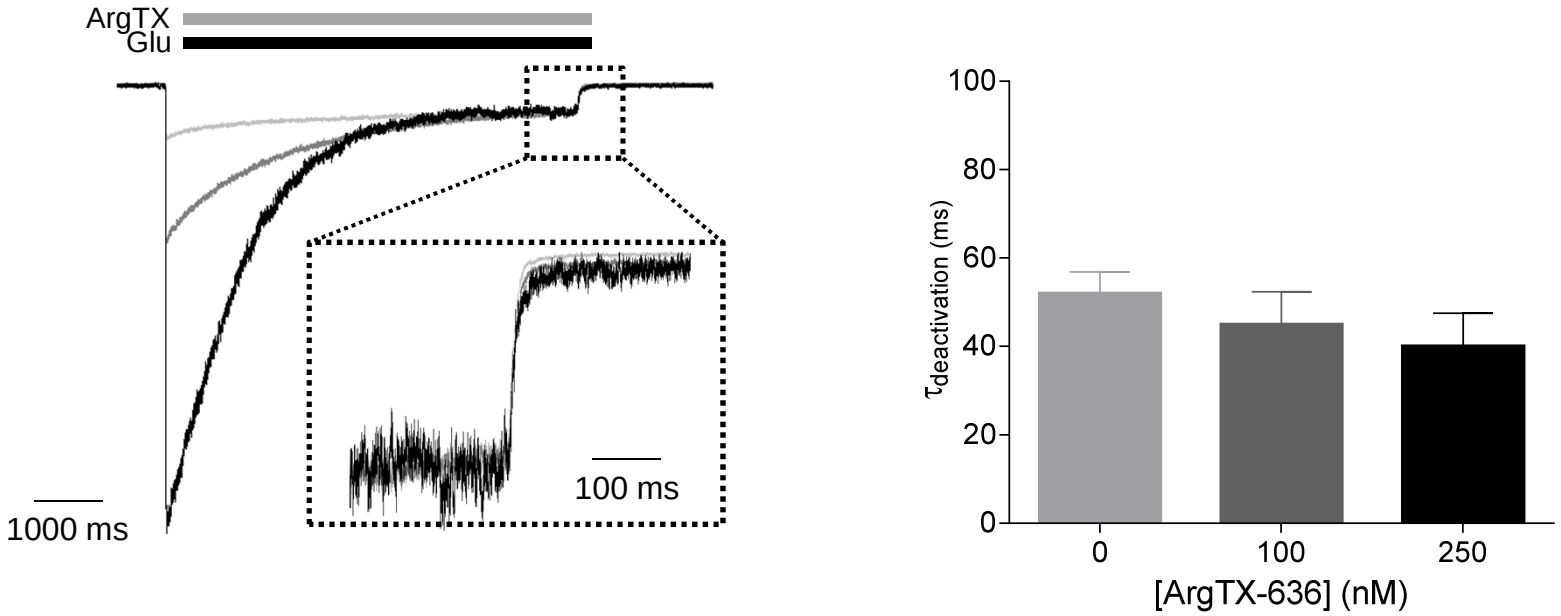

Fig. S1 Effect of ArgTX-636 on deactivation kinetics of GluN1/2A. *A.* Overlay of the current-responses to 100 µM Glu in the absence (*light grey*) and presence 100 nM (*dark grey*) and 250 nM (*black*) ArgTX-636. Traces have been normalized to the steady-state current amplitude immidiately before removal of agonist. Insert show expanded view of the time-course of current deactivation. *B.* Summary of the deactivation time constants ($\tau_{deactivation}$). Data are mean $\pm$ SEM from five to ten cells.

Supplemental figure S2

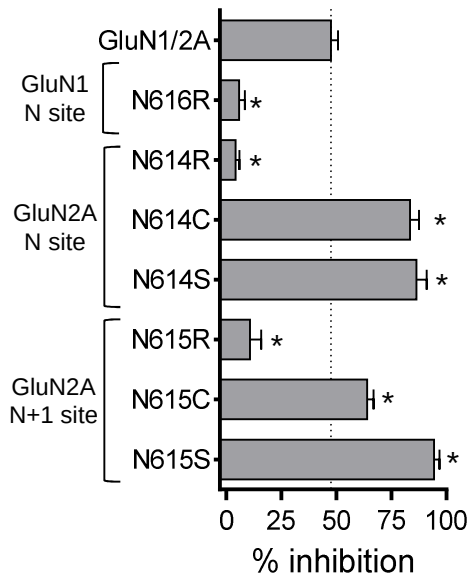

Fig. S2 Effect of mutation of Asn residues in the N position of GluN1 and the N and N+1 positions in GluN2A on ArgTX-636 block. *A.* Summary of block by 100 nM ArgTX-636 of the current-response evoked by 100 µM Glu and 100 µM Gly from WT and mutant GluN1/2A receptors in *X. laevis* oocytes held at -60 mV. Data are mean ± SEM from five to ten oocytes. * $P < 0.05$ compared to WT GluN1/2A (ANOVA).

Supplemental figure S3

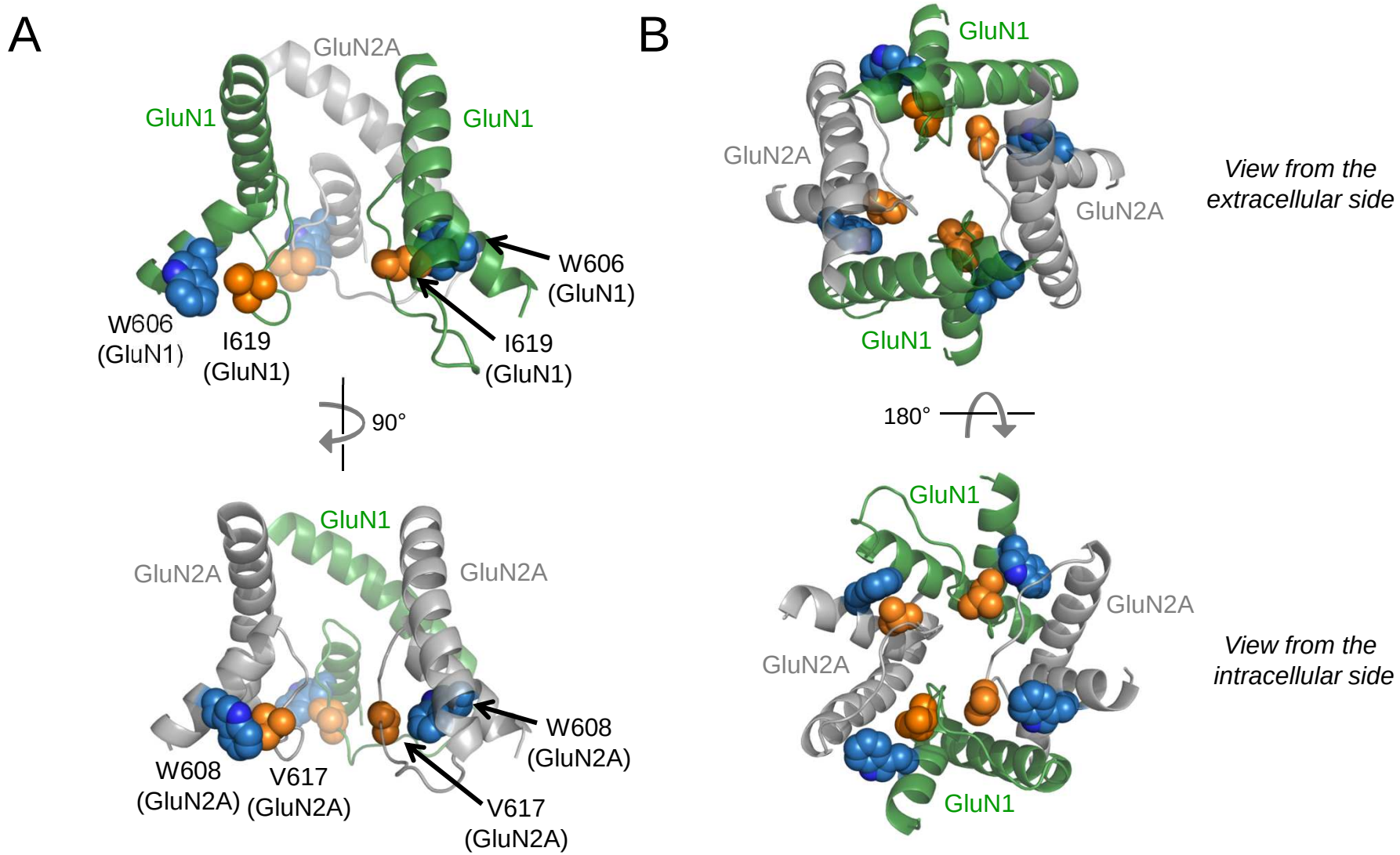

Fig. S3 Location of N+3 residues on the M2-pore loop segment and Trp residues on the M2 helix segment. *A, B.* The N+3 residues in GluN1 and GluN2A (I619 and V617, respectively; shown as orange spheres) and selected Trp residues on the M2 helix segment of GluN1 and GluN2A (W606 and W608, respectively; shown as blue spheres) are shown on a homology model of the M2 and M3 segments in the GluN1/2A ion channel (Nelson *et al.* 2009).